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ABSTRACT

A study examined the acceptance and effectiveness of a basic public speaking course that uses a modified Personalized System of Instruction (PSI) approach. Based on behavioristic psychology, PSI stresses mastery learning, self-pacing, the written word, student proctors, and lectures that motivate rather than just supply essential information. Five PSI sections of 45 to 50 students each were conducted at the same time as 38 tarditionally taught sections of 22 students each. During the eighth week of classes, students completed a questionnaire that assessed perceived speaking anxiety, reasons for taking the course, expectations about it, and interest in topics. During the last week of regular classes, a second questionnaire sought the same information as well as other information pertaining to perceived learning from the course and attitudes toward it. Results indicated that students in the PSI sections reported higher levels of perceived learning, higher overall satisfaction with course content and format, lower levels of communication apprehension, and higher cognitive retention of course material than did students in the traditionally taught course sections. Their final grades were also higher. (JL)

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PSI Vs. A MORE TRADITIONAL MODEL FOR TEACHING THE BASIC COURSE

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BACKGROUND

Given the financial realities of shrinking enrollments and budgets at institutions of higher education, it is no longer merely a challenge to provide the best education for students at the lowest possible cost. That challenge has become a mandate. Consequently, teachers and administrators are turning to educational models which promise high returns in student credit hours for the lowest investment of faculty time. Some basic speech communication courses are broadcast over closed-circuit or public television, reaching very large audiences simultaneously. Others use a mass lecture model, which produces the same effect (reaching large numbers) with fewer of the technical problems associated with media presentations. Still other universities hire graduate assistants to teach sections of the basic course with as many as 100 students per individual section, and other courses are taught by a combination of instructors, graduate teaching assistants and undergraduate teaching assistants.

The study presented here represents a pilot attempt to investigate a somewhat novel approach to increasing productivity in the basic interpersonal and public speaking course, while attempting to maintain a high degree of student--instructor interaction. Based, in part, on the basic public speaking course at the University of Nebraska, this alternative is a modified Personalized System of Instruction (PSI) model.[1] The research was conducted during the first semester of implementation of this program and represents an attempt to assess the acceptability of this alternative from both the viewpoint of the faculty/administration and students enrolled in the course.

The basic interpersonal and public communication course at Central Michigan University (SDA 101) is charged with two significant goals for the Department of Speech and Dramatic Arts and for the University as a whole. For one, the course provides students with an introduction to speech communication in a number of contexts: intrapersonal, interpersonal, small groups, public speaking and organizations. As such, the course provides an introduction to the components and complexities of the communication process through presentation of relevant concepts and research, which is primarily a cognitive activity. In addition, the University has charged

SDA 101 with certifying "oral English competency" among students who successfully complete course requirements. That is, people who complete this course with a grade of C or better must be certified by the SDA 101 faculty as "competent" in public and interpersonal communication. Needless to say, this is no small task.

Much as been written about competency (minimal competency, basic competency, general competency, maximal competency, etc.) in recent years.[2] Unlike competency in punctuation or basic mathematics or reading, competency in speech communication is a difficult concept to operationalize and assess. Nevertheless, more and more institutions are calling for a program which will produce competent communicators, whatever that means. For Central Michigan University, competency refers primarily to public presentations, although interviewing and other relational types of communication skills are also stressed.

To attempt to integrate the need for cognitive understanding and demonstration of communication skills with the need for financial feasibility, the faculty associated with SDA 101 decided to seek alternatives to the traditional models for teaching the basic course.

PSI: THE GENERAL ASSUMPTIONS

The PSI model is based primarily on behavioristic approaches to understanding human behavior. In particular, it is assumed that success is rewarding for students and a lack of success can be punishing. Five defining characteristics differentiate the PSI approach from other teaching/learning models: 1) mastery learning; 2) self-pacing; 3) a stress on the written word; 4) student proctors; and 5) the use of lectures to motivate rather than to supply essential information.[3]

Mastery learning is consistent with expectations about competency, because it requires the student to demonstrate cognitive or behavioral abilities before moving on to the next task. Specification of a minimal mastery level creates very specific guidelines for students about what is required for the course. To reach these standards, students are permitted to repeat each assignment as many times as is necessary to achieve mastery. Consequently, the PSI model presumably comes closer to a competency-based model than most traditional approaches

used to teach speech communication. Because students are literally forced to achieve academically--possibly at levels even higher than they would have set for themselves, this mastery approach can be very rewarding and highly motivating for students.

Self-pacing permits a student to move through the course content at a speed which is commensurate with his or her personal abilities and past experiences with this material. Self-pacing also allows students to make adjustments in personal study habits, making significant progress in the PSI course when work loads for other courses are light and easing up on the PSI work when other responsibilities are more pressing. For a speech communication course, self-pacing allows the experienced speaker to complete the public speaking assignments and concentrate more time and energy on the interpersonal assignments. Likewise, students who are apprehensive about public speaking can take extra time to practice and repeat speaking assignments.

A stress on the written word allows students to complete significant portions of the course work independently, helping students to become more responsible for their own learning. Instead of relying on an instructor to disseminate information, students utilize textbooks, study guides, workbooks and audio-visual materials to progress through content material. Naturally, this reliance on printed and audio-visual material requires considerably advance preparation by faculty in such courses. Often, textbooks and workbooks must be created for the specific needs of one particular course. Furthermore, it forces instructors to be clear and specific about course objectives.

The use of student proctors both personalizes the communication which takes place within the course and also helps to make the best possible use of the instructor's time. In most PSI courses, student proctors score the tests and go over test material with the students before and after taking the unit tests. In addition to playing the role of tutors, student proctors answer questions, help students assess progress, and generate enthusiasm for the course. Because these are students who have successfully completed the course themselves, the student proctors understand some of the problems--as well as the advantages--of the PSI model and can share these with students in the course. In addition, delegating much of the responsibility

for the routine matters of course operation to the student proctors allows the instructor more time to spend with students who are having serious difficulties. Because they are spared from having to give exams, lecture, facilitate group discussions, and so on, the instructors have time to devote to students who really need their help.

The fifth characteristic of the PSI model is the use of lectures to movitate rather than disseminate essential information. Because the course content is contained in the text, workbook and other supplementary materials, lectures can be used to generate affect for the material or to supplement the basic information. Guest speakers, feature films, and other presentational devices can be used rather than a traditional notetaking-type lecture model.

Overall, the PSI approach to teaching speech communication appears to be an appealing one, because it conforms to many of the dictums of what is typically considered "good" teaching. In particular, objectives are clearly stated so that students know what is expected of them, students are required to master the material rather than merely recall bits and pieces for a final exam, students can move through the material at their own pace, students must take responsibility for their learning and set deadlines for tasks, students help other students with course content, and teachers are free to interact with students who have problems on a one-to-one basis. Naturally, the model also tends to be highly cost-effective. A section of 60 students can be easily handled by one faculty member and 6 or 7 undergraduate teaching assistants (UTA's). Given the fact that most performance courses enroll 18 to 20 students per section, this figure roughly triples the student credit hours involved.

THE RESEARCH QUESTIONS

Because of the apparent advantages of the PSI model, we predicted that both student and faculty acceptance of this teaching approach would be high. In particular, we predicted that students enrolled in PSI sections 1) would express greater liking for the course as a whole; 2) would perceive greater learning of specific course content; 3) would indicate higher levels of improvement in personal communication skills; 4) would express less overall levels of speech anxiety; and 5) would demonstrate higher levels of retention on the final exam than students in the traditional sections of the basic course.

THE RESEARCH DESIGN

To test our hypotheses, materials were created to permit implementation of a pilot PSI program. Five PSI sections were created, with enrollment specified at 45 to 50 students in each section. Thirty-eight sections were created using the traditional lecture--recitation model, with 22 students enrolled in each section. Four PSI sections were taught by second-semester graduate assistants, and the fifth section was taught by a full professor on the SDA faculty. All but two of the traditional sections were taught by graduate assistants; the mass lecture material was presented by members of the SDA faculty.

The Traditional Model (Lecture--Recitation)

Beginning in the early 1970's (and ending in Fall, 1982), the basic interpersonal and public communication course at Central Michigan University was composed of one part televised lecture and two parts lab/recitation section. Each week, a thirty-minute videotape was aired over the local public broadcasting station. This videotaped program was assembed in the studio and was prepared to resemble the typical thirty-minute informative television program. The videotaped program provided the "lecture" content for the week, although students were held responsible for other text material not covered on the tape. Twice during the week, students met with their section instructor. In these lab/recitation sections, the students participated in activities and simulations to apply the concepts presented on the tape. Speeches were also presented and graded in the individual sections. During most semesters, assignments and examinations were standardized across all sections and the curve for grading exams and for assigning final grades was the same for all sections. Wednesday afternoons from 4-6 PM were reserved for presentation of additional material, which was used to supplement the videotapes. This material was presented in a mass lecture format. Every effort was made to assure that the graduate assistant was perceived as the primary instructor for his or her sections of the course.

Graded speaking assignments during Winter semester, 1982, consisted of three speeches: a group symposium speech (10%); an individual speech (15%); and an individual speech to a specified audience (20%). Two written assignments were required: an ungraded

complete sentence outline and a communication analysis paper, which asked the student to examine his/her own communication strengths and weaknesses (20%). The midterm (10%) and final (25%) exams comprised the remainder of the students' final grades. These multiple-choice examinations were based on the videotapes, the inclass material, and the supplementary mass lectures. Included with the syllabus was a study guide which asked questions corresponding to items on the final exam. A list of key terms was also provided for both the midterm and final exams.

The PSI Model

All assignments required for these sections of the basic course were repeatable, except for the communication analysis paper. Instead of taking a midterm examination, students were required to complete four unit tests which covered the same basic material. Each twenty-five multiple-choice question unit test was worth 5% of the final grade and could be repeated as many times as necessary to achieve 80% competency (a grade of B-). Most students repeated exams two or three times, many to achieve scores of 100%. No student repeated an exam more than 6 times (there were 6 forms of each exam), and no student failed more than one unit exam (failed to achieve 80% mastery by the deadline). Starting and due dates for exams were staggered throughout the semester, with a new exam beginning about every two weeks and allowing four to five weeks for completion of each one. All unit tests were completed at the University Testing Center, meaning that testing did not require class time but required that students schedule out-of-class hours.

Like the tests, the speaking assignments could be repeated as often as necessary to achieve the minimal required grade of B. Undergraduate teaching assistants (UTA's) were trained to assess these speeches and to serve as speaking coaches for students. No grades were recorded for the first two speeches, which were presented to the undergraduate judges. A student could repeat each speech as many times as necessary, but students rarely required more than two attempts to attain the specified B level. Students who were extremely speech-anxious received coaching from UTA's and from the instructor. When a student had completed two speeches at a B level or higher, the student was allowed to give his or her final speech to the class instructor. This final speech was graded and accounted for 35% of

the student's total grade for the course.

A written communication analysis assignment involved critiquing one's personal communication style and problems encountered in using language, using nonverbal cues, relating to others, etc. This paper counted 20% of the final grade and could not be rewritten. The final 25% of each student's grade was comprised of the final exam, which was the same standardized final exam given in the traditional sections.

Class met three times per week for 50 minutes each time. Mondays were specified, in general, as informative days; Wednesdays were frequently designated as class activity days; and Fridays were often used for presenting speeches. Attendance was not mandatory in the PSI sections, although it was required in the regular sections.

Naturally, the PSI model implemented for this study deviates somewhat from the model developed by Keller and others.[4] In particular, the original model discourages "failure" in any form. Assigning grades to the unit tests and assigning E grades to students who did not complete a test on time would be considered a form of course "failure" not called for in the general model. Nor was their a real hierarchy of material presented, such that mastery of earlier material was critical to mastery of later material, although there was a strong tendency for this to be true. Not allowing students to repeat the communication analysis paper and the final exam also violates the specifications for the general model, because these restrictions limit the mastery emphasis. Because tests were taken elsewhere, student proctors served as coaches and tutors but had less direct involvement in helping students study for and pass the unit tests. Setting deadlines for completion of assignments and tests put some restrictions of the students' ability to move through the material totally at their own pace; although technically a violation of the specifications of the Keller model, setting such deadlines has been recommended elsewhere to force students to complete the course within a quarter or semester.[5] Finally, the reliance on the written word in this class was by no means absolute. Objectives were specified for each item on the tests and for components of the written and speaking assignments. The text used for this course was developed by SDA faculty based on a competency model, and a workbook was provided which supplemented this material. Much of the actual coaching

was done on a one-to-one basis and was done orally. In addition, some dissemination of information was handled by the course instructor orally during the Monday sessions.

METHOD

Students were assigned to sections of the basic course by computer, using only available schedule times as the selection criterion. Consequently, students assigned to PSI sections had no idea that they were in sections which differed in any significant way from other sections of SDA 101. The distinctions between the two models were made on the first day of class, and students who preferred to be transferred to traditional sections were moved during that first week of classes.

A questionnaire was administered during the eighth week of classes to assess perceived speaking anxiety (PRCA-20),[6] reasons for taking SDA 101, expectations about SDA 101, interest in specific topics covered in the course, and general demographic information. Questionnaire administration took place before any discussion of public speaking and before students had had the opportunity to present their first speeches.

A second questionnaire was administered during the last week of regular classes. The first twenty items on the questionnaire correspond to the items in PRCA-20, as in the first questionnaire. The following 18 questions asked students to respond to a number of likert-type statements about SDA 101. Response categories were the following: strongly disagree, disagree, undecided, agree and strongly agree. The questions pertained to perceived learning from the course, utility of certain pedagogical aspects of the course, and attitudes toward taking the course and others like it (see the Appendix for a list of the specific items). Four questions requested demographic information: class standing, major college, expected grade in SDA 101, and present GPA. A fifth question in that section asked for an overall rating of SDA 101 as very uninteresting, uninteresting, neutral, interesting or very interesting. The following two questions asked for an assessment of the difficulty of the course and an assessment of the utility of taking SDA 101 overall. People who were not in a PSI section were asked whether or not they wished they were; people who were in PSI sections were asked whether or not they were glad of that fact (response categories: yes, no.) Finally,

four questions pertained only to sections of PSI and asked for evaluations of portions of the PSI model: helpfulness of the UTA's; usefulness of repeating speeches and exams; and the likelihood that the student would recommend this format to friends (response categories: very much, somewhat, not really).

Data were analyzed using SPSS, version 8.0. Chi-square statistics were computed for all categorical data (class, major college, GPA, and grade expected). T-test analyses were computed for the PRCA and likert-type items, the assumption being that the likert statements involved ordinal data with fairly equal intervals. The PRCA index was created by summing results for each of the twenty items, all items being coded so that higher PRCA scores indicated higher levels of communication apprehension. Alpha levels were set at p. 05 for the t-test analyses, one-tailed probability.

RESULTS

Table 1 presents the results of t-tests from likert-type items on the first questionnaire, plus the means for PSI and nonPSI groups on the PRCA index. Eight weeks into the semester (near midsemester), PSI groups reported higher agreement with items assessing communication skills acquired, perceived improvements, ability to interact in small groups, the soundness of the introduction to the field, use of language, understanding of relating skills and general interest in the course. PSI students were also significantly more likely to recommend SDA 101 to others and to take another course in the department than students in the traditional sections. There was no significant difference between the two groups on the PRCA index midway into the semester.

Not tabled are the results of the chi-square analyses for class, major college, grade expected in SDA 101, and current grade point average. There were no significant differences for any of these variables from the first questionnaire.

Table 2 presents the t-tests between PSI and nonPSI groups during the second wave of testing, including likert-type items, course evaluation items, and the PRCA index. This time, there is a significant difference between groups for every item except "This course has helped me overcome my fear of speaking in public." Overall, students in the PSI sections expressed higher levels of perceived learning, liking for the course, and interest in course content. PSI students felt that

the course was somewhat easier than did students in the traditional sections. Finally, students in the PSI sections reported lower overall levels of speech anxiety than did students in the other sections.

Comparing the actual means in Table 2 with those in Table 1, perceptions of learning and liking for the course increased somewhat for both groups between $time_1$ and $time_2$. Because identification was not requested on the questionnaires, it was not possible to assess actual changes between the two data sets, however.

Not tabled are the chi-square analyses for class, major college, grade expected in SDA 101 and current grade point average. There were no significant differences with regard to class standing, both groups being composed of approximately 70% freshmen, 12% sophomores, 7% juniors, 8% seniors and 3% nondegree candidates. Likewise, there were no significant differences between groups with regard to major college: 45% Business; 18% Arts and Sciences; 8% Education; 16% Fine and Applied Arts; 10% Physical Education; and 3% undecided. Nearly 70% of each group reported carrying a B or better grade point average; there were no statistically significant differences between the two groups on this variable. Finally, with regard to expected grade in SDA 101, PSI students reported higher expectations than did students in the nonPSI sections. In particular, 16.2% of the PSI students expected to receive a grade of A, compared with only 10.2% of the students in the other sections. For the PSI sections, 55.0% expected an A- or B+; 23.4% expected a B or B- and only 3.6% expected below a B- for the course. In contrast, 43.8% of the students in the traditional sections expected an A- or B+; 34.0% expected a B or B-; and 11% predicted that they would receive a grade below B-.

Table 3 presents descriptive information about the PSI model which was completed only by students in the PSI sections. Over two-thirds of the students reported that working with the UTA's was at least "somewhat" helpful, with 36.9% reporting that working with UTA's was "very much" helpful. The same number of students felt that repeating speeches helped them "very much," and another 25% felt that being able to repeat was "somewhat" helpful to them. Apparently especially helpful to students was the ability to repeat the unit tests: 53.2% reported that this ability helped them "very much." Less than 10% felt that repeating the exams was not helpful (the percentage of people who typically achieve A's on an exam on the first try). Finally, 62.2%

of the people in the PSI sections said that they would "very much" recommend this format to their friends. Only 5.4% responded "not really" (and 29.8% failed to respond to this item).

The final question posed was whether or not students in the PSI sections would retain more of the content and, consequently, perform better on the final exam. Table 4 presents the means for the final examination scores. As predicted, students in the PSI sections scored signficantly higher on the final exam than did students in the more traditional sections of SDA 101. In fact, PSI students scored an average of 7 points higher on the 100 item exam.

Overall, all predictions were consistent with the data collected. Students in the PSI sections reported higher levels of perceived learning, higher overall satisfaction with course content and the course format, lower levels of communication apprehension, and higher cognitive retention of course material. Although the exact numbers have not yet been recorded, it is also known that students in the PSI sections performed at higher levels on the final graded speech than did students in the other sections. No student in the PSI group received a grade lower than B- on that final speech; numerous students in the other sections received C's, D's and even E's on the final speech. Again, the exact information is not yet available, but it seems clear that final grades were higher in PSI sections than in the nonPSI sections, which is consistent with the assumptions of the mastery-based PSI model.

DISCUSSION

Although preliminary and problematic, the data present here provide support for the claim that a PSI model can be an effective alternative to other models for teaching the basic interpersonal and public speaking course. The mastery-based approach inherent in the PSI model permits educators to claim with more conviction that completion of the basic course leads to completion of minimal "competence" requirements in oral communication. In particular, requiring B- or better performance on the speaking assignments in the course virtually ensures that each student will receive a grade of C or better on the final speech. Consequently, it becomes less likely that a student will "ace" the exams and do poorly on the oral assignments, averaging out to a passing grade for the course without ever really demonstrating

oral English competence. Likewise, requiring students to excel on the unit tests helps them to learn more of the material and, very likely, leads to longer retention of key concepts. Rather than cramming for an exam and accepting the resulting grade, students are required to master the material, through a series of repeated attempts. Again, the instructor is likely to feel more confident of a students "competence" regarding this material, knowing that the student was able to achieve a grade of B or better on the unit tests.

Clearly, the students themselves expressed positive regard for both the content and format of the course. Because SDA 101 is a requirement for many students, the majority of any section tend to have an "I have to be here but I doubt that I will like it" sort of attitude on the first day of class. Apparently, being in a PSI section can lead to a genuine sense of accomplishment and liking for the course, over and above the positive affect produced by the content and instruction in the more traditional sections of the course.

Naturally, there are problems with the data used for this analysis. Because instructors were not randomly assigned between PSI and nonPSI groups, it is unknown how much of the difference between groups can be attributed to instructor differences. Likewise, the uneven distribution between the groups in terms of sheer numbers could contribute to the results obtained. Knowing that there were already significant differences on many variables at $time_1$ (eight weeks into the semester) both strengthens and weakens the findings here. It may be the case that the PSI model was able to create significant differences in only eight weeks, because the model is clearly superior. On the other hand, we cannot rule out the possibility that the differences would have been found at week 1--before any content had been presented. Not having data from that first week of classes, consequently, severely limits the conclusions which can been drawn from this study. Nor do we know how much information was retained in the months following the final exam, because no data were collected after students completed the course. Likewise, we cannot say for certain that a B- grade on a final speech can be generalized to a B- performance in a boardroom or other presentation setting.

Nevertheless, it seems that the PSI model for teaching the basic course is superior to the more traditional approach in many ways. For one, the hierarchical nature of the course permits instruction

of a larger number of students than was possible in the more traditional sections of the course. The use of undergraduate teaching assistants allows for a high student--instructor/facilitator ratio, and frees the instructor to coach students on a more personal basis. Consequently, it may be the case that the PSI model allows for an even more personalized approach to teaching this material than the model which incorporates one instructor and only 22 students. The use of undergraduate teaching assistants may have another advantage as well: this experience probably serves to integrate these students more successfully into the program, thus providing more majors and minors in the department. Not yet examined is the possibility that PSI can relieve some of the aggravation caused by a course which draws a population with a very wide range of capabilities at the outset. Some form of prescreening could enable instructors to create sections of students who are already high in speaking skills but low in interpersonal skills, sections of students who are extremely high in communication apprehension, and so on. Special programs could be developed to achieve maximal success for a wide range of remediation needs; likewise, self-pacing would permit students to go beyond the minimal requirements when they already have a basic understanding of the material.

Research which is ongoing at the present time will attempt to address some of the problems with this study and, in addition, to look at some of the other potential applications of this model to teaching the basic course. Although creation of a PSI course is a time-consuming and highly ambitious project, we suspect that this approach will prove to be a viable one for the basic speech communication course in the future.

Table 1: t-tests between PSI groups and nonPSI groups; first data collection

Item on Questionnaire	MEANS		t-value
	PSI	nonPSI	
This course will help me overcome my fear of speaking.	3.4	3.3	0.9
This course will give me skills which will make me a better person.	3.5	3.3	2.1*
This course will help me communicate more effectively with others.	3.8	3.7	0.9
I've already noticed improvements in my communication as a result of this course.	3.2	2.9	2.7**
I feel more comfortable communicating in groups as a result of this course.	3.2	3.0	2.4**
I feel as if I am getting a sound introduction to the field of communication.	3.4	3.1	2.8**
This course has improved my listening skills.	3.4	3.1	3.0**
This course has helped me perceive objects, people, and myself more clearly.	3.3	3.2	1.2
This course has made me more aware of the importance of language and symbols.	3.6	3.4	2.4**
This course has helped me understand nonverbal communication.	3.6	3.4	2.1**
This course has given me new insights into how relationships develop, change, and end.	3.2	3.3	-0.7
The material overall has been interesting.	3.3	3.0	2.6**
I like the format of the course.	3.6	2.8	6.7***
I would recommend this course to others.	3.6	2.7	7.9***
I would take this course if it were not required.	2.6	2.4	2.3**
I plan to take another course in speech or communication before I graduate.	2.6	2.4	2.1*
PRCA	58.8	59.5	-0.7

Table 2: t-tests between PSI groups and nonPSI groups

Item on questionnaire	MEANS PSI	MEANS nonPSI	t-value
This course has helped me overcome my fear of speaking in public.	3.3	3.2	0.7
This course has given me skills which can make me a better person.	3.8	3.3	4.1***
As a result of this course, I feel I can communicate better with others.	3.8	3.4	4.0***
I feel more comfortable communicating in groups as a result of this course.	3.6	3.3	2.4**
I feel I received a sound introduction to the field of communication.	3.8	3.3	4.2***
This course has improved my listening skills.	3.7	3.2	4.4***
This course has helped me perceive objects, people and myself more clearly.	3.6	3.3	3.1***
This course has made me more aware of my use of language.	3.7	3.4	3.0**
This course has helped improve my use and awareness of nonverbal communication.	3.8	3.5	2.4**
This course has helped me understand how relationships grow and change.	3.8	3.3	4.4***
I like the format of this course.	3.8	2.9	7.5***
I would recommend this course to others.	3.7	3.0	6.1***
I would take this course if it were not required.	2.8	2.5	2.4**
I plan to take another communication course before graduation.	2.8	2.6	1.9*

Table 2, continued

Item on questionnaire	MEANS PSI	MEANS nonPSI	t-value
Overall, would you rate this course as... (1= very uninteresting; 5= very interesting)	3.5	3.3	2.2*
Would you say this course was... (1= very easy; 5= very difficult)	2.5	2.8	-3.1***
Would you say this course was... (1=not at all worthwhile; 5= very useful)	3.8	3.5	2.7**
PRCA-20 (range = zero to one hundred; high score indicates high anxiety)	55.4	58.0	-2.5**

* $p \leq .05$
** $p \leq .01$
*** $p \leq .001$

Table 3: Student evaluations of specific aspects of PSI model, PSI sections only

Questionnaire item	
Did you find working with UTA's helpful?	
very much	36.9%
somewhat	33.3%
not really	6.3%
no response	23.5%
Did repeating speeches help you?	
very much	36.9%
somewhat	25.2%
not really	16.2%
no response	21.7%
Did repeating exams help you?	
very much	53.2%
somewhat	15.3%
not really	9.9%
no response	21.6%
Would you recommend this format to your friends?	
very much	62.2%
somewhat	12.6%
not really	5.4%
no response	29.8%

Table 4: Final Examination Scores

(One hundred, multiple choice questions)

GRAND MEAN:	77.57	
PSI MEAN:	83.10***	(n=160)
REGULAR SECTIONS	76.57	(n=913)

$p \leq .001$

ENDNOTES

[1]For a more complete discussion of the program at Nebraska, refer to articles presented and published by Seiler and others (Diana Prentice, Melissa Beal).

[2]For example, see Allen and Brown, DEVELOPING COMMUNICATION COMPETENCE IN CHILDREN; Bochner and Kelly, "Interpersonal Competence: Rationale, Philosophy and Implementation of a Consumptual Framework;" Connolly and Brumer, THE GROWTH OF COMPETENCE; Foote and Cottrell, IDENTITY AND INTERPERSONAL COMPETENCE; Wiemann, "Explication and Test of Communicative Competence;" and Weinstein, "The Development of Interpersonal Competence."

[3]Keller and Sherman, THE KELLER PLAN HANDBOOK: ESSAYS ON A PERSONALIZED SYSTEM OF INSTRUCTION.

[4]Ibid.

[5]These suggestions were made by Dr. Gary Dunbar at Central Michigan University who has developed a PSI model to teach basic psychology.

[6]McCroskey, "Measures of Communication-bound Anxiety."

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